REMARKS/ARGUMENTS

The claims have been amended as set forth above. Further consideration is respectfully requested as set forth below. No new matter has been added.

I. Examiner Interview dated January 16, 2008

An interview was held on January 16, 2008. During the interview the changes here were discussed in detail. Independent claims 1 and 17 were discussed in light of the references. Applicants believe that an agreement was reached that the current changes overcome the cited references. Reconsideration is respectfully requested. Also, the claims where addressed as set forth above in light of 35 U.S.C. § 101 issues discussed during the interview. With regard to an example of a field weight, the field weight may be a preset weight, may be a weight calculated based on the identified section, and/or the field weight may be determined other ways as further set forth in the specification.

II. Rejection under 35 U.S.C. 103(a)

Claims 1-39, 42-45, and 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,960,383 issued to Fleischer (hereinafter "Fleischer") in view of Brin et al. "*The Anatomy of a Large-Scale Hypertextual Web Search Engine*," Sergey Brin and Lawrence Page, Stanford University, Stanford, CA, April 14, 1998 (hereinafter "Brin"). Claims 40, 41, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleischer in view of Brin and further in view of U.S. publication NO. 2002/0169595 published to Agichtein (hereinafter "Agichtein"). Applicants respectfully disagree. Independent claim 1 includes the following combination of features that is not taught or suggested by the cited reference:

> ***determining fields of the document, wherein each field includes a contextual section of the document based on the document structure;***
>
> ***determining a field weight for each of the determined fields, wherein the field weight corresponds to a number of times for replicating the content of each of the determined fields;***

replicating the content of each of the determined fields the number of times indicated by the field weight for each of the determined fields, wherein the replicated content of each field is concatenated into a field set for each of the determined fields;

combining each concatenated field set for each field of the document to generate a virtual document including each concatenated field set for each field of the document;

indexing the virtual document to produce a virtual document statistics; and

computing the field-weighted score from the virtual document index based on the query.

The above combination of features is not taught or suggested by the cited references. Fleischer teaches that what is desired in the art is "an automatic means by which to process available documents to provide a reader a synopsis of the material contained in the document." *Fleisher* at col. 1, lines 25-27. Fleischer addresses this need by providing a method and apparatus for condensing a document. *Fleisher* at col. 1, lines 34-37. Fleisher divides the document into a plurality of sections and compares the words of the sections to a document noun phrase list. *Fleisher* at col. 1, lines 41-54. Fleisher counts the number of times that a match occurs between the words of the section and the document noun phrase list. *Fleisher* at col. 1, lines 41-54. The count of matches is then used to rank the section of the document. *Fleisher* at col. 1, lines 41-54. When a user pulls up the document, the sections will be presented to give the reader of synopsis of the material contained in the document. *Fleisher* at col. 1, lines 41-54.

More specifically in Fleisher, the document is ***divided into noun phrases***. The noun phrases are given a weight that is based on the number of times that the noun phrase appears in the document and the typical usage of the noun in the English language. *Fleisher* at col. 3, lines 31-52. ***After the noun phrases of the document have been identified and ranked, the document is divided into sections*** (e.g. chapters, paragraphs or sentences). *Fleisher* at col. 3, lines 52-60. Each section is then analyzed to provide a section noun phrase list which corresponds to the section. *Fleisher* at col. 3, lines 61-65. A ***score*** is given to the section ***based on the noun phrases***. Fleisher teaches that "[o]ne method of determining the "score" for a section is to simply add the weights associated with each of the noun phrases identified for the section which are also found in the document noun phrase list 26." *Fleisher* at col. 4, lines 9-14.

From the rankings, the Extractor then determines which paragraphs of the original input document will appear in the output text. *Fleisher* at col. 4, lines 16-18. ***Fleisher uses the noun phrase to rank the sections to determine which section to output*** because Fleisher is concerned with providing an automatic means by which to process available documents to provide a reader a synopsis of the material contained in the document.

Brin is the academic paper that seeded Google. Brin teaches a PageRank calculation for a search. The PageRank calculation is an algorithm for ranking a page in a database so that when a user searches a database the most relevant pages are returned. PageRank is an attempt at an objective measure of a page's citation importance. *Brin*, at section 2.1. PageRank takes into account how many pages link or point to the page of interest. For example, a page may have a high PageRank if several pages link or point to the page. *Brin*, at section 2.1. The PageRank is a measure of the significance of the page in a search.

Brin identifies Anchor Text as text of links in a page. For the search engine, Brin associates the text of the link with the page that the link is on and the page that the link points to. Through the double association, searches can be ran for non-text items that are not identified by a web crawler and the accuracy of the search is increased. Here, Brin is teaching calculating a citation importance for a page through a PageRank and using anchor text to improve the accuracy of a search. For example, a user may input a very general search such as "Bill Clinton." The search engine will produce search results that include pages which have a high PageRank (e.g. have been cited to by other documents).

Brin also teaches that "a hit list corresponds to a list of occurrences of a particular word in a particular document including position, font, and capitalization information. *Brin*, at section 4.2.5. Brin teaches two types of hits that include fancy hits and plain hits. *Brin*, at section 4.2.5. Fancy hits include hits occurring in a URL, title, anchor text, or meta tag. *Brin*, at section 4.2.5. Plain hits include everything else. *Brin*, at section 4.2.5. The two types of hits are used during the ranking of the documents. Brin teaches that "Google considers each hit to be one of several different types (title, anchor, URL, plain text large font, plain test small font) each having its own type-weight. *Brin*, at section 4.5.1. **Brin does not teach the replication of the document. Brin pertains to the document itself.**

Subbaroyan teaches a method of ***identifying spoof documents***. *Subbaroyan*, at Abstract. Subbaroyan teaches that one method for spoofing a document includes repeating a particular word many times within a document in order to increase its weighting factor. *Subbaroyan*, at col. 11, lines 65-67. Subbaroyan presents an example where the word "museum" is incorporated 50 times within a pornographic Web site. *Subbaroyan*, at col. 12, lines 1-6. When a user searches about museums, the pornographic Web site will be returned to the user. *Subbaroyan*, at col. 11, lines 1-6. The replication in Subbaroyan would occur from a web site designer entering the word museum several times and associating it with a web site. It is not replicated because of a field weight. Stated another way, Subbaroyan teaches that the replication causes the weight. Subbaroyan is not teaching that the weight causes the replication.

The references cannot be combined in the manner propounded. Fleisher and Brin pertain to identifying documents that are relevant to a search. Subbaroyan however pertains to identifying documents which ***are not*** relevant (e.g. spoofed documents). Furthermore, as indicated by the above explanation of the references, neither Fleisher nor Brin nor Subbaroyan teach or otherwise suggest the above combination of features. Neither reference teaches or suggests the combination of "determining fields of the document, wherein each field includes a contextual section of the document based on the document structure", "determining a field weight for each of the determined fields, wherein the field weight corresponds to a number of times for replicating the content of each of the determined fields", "replicating the content of each of the determined fields the number of times indicated by the field weight for each of the determined fields, wherein the replicated content of each field is concatenated into a field set for each of the determined fields" and "combining each concatenated field set for each field of the document to generate a virtual document including each concatenated field set for each field of the document." Accordingly, applicants assert that claim 1 is allowable over the cited references.

Independent claim 9 includes the following combination of features that is not taught or suggested by the cited reference:

> ***determining fields of the document, wherein each field includes a contextual section of the document based on the document structure;***
>
> ***determining a field weight for each of the determined fields, wherein the field weight corresponds to a number of times for replicating the content of each of the determined fields;***

replicating the content of each of the determined fields the number of times indicated by the field weight for each of the determined fields, wherein the replicated content of each field is concatenated into a field set for each of the determined fields;

combining each concatenated field set for each field of the document to generate a virtual document including each concatenated field set for each field of the document;

indexing the virtual document to produce virtual document statistics; and

computing the field-weighted score from the virtual document index based on the query.

The above combination of features is not taught or suggested by the cited references. Fleischer teaches that what is desired in the art is "an automatic means by which to process available documents to provide a reader a synopsis of the material contained in the document." *Fleisher* at col. 1, lines 25-27. Fleischer addresses this need by providing a method and apparatus for condensing a document. *Fleisher* at col. 1, lines 34-37. Fleisher divides the document into a plurality of sections and compares the words of the sections to a document noun phrase list. *Fleisher* at col. 1, lines 41-54. Fleisher counts the number of times that a match occurs between the words of the section and the document noun phrase list. *Fleisher* at col. 1, lines 41-54. The count of matches is then used to rank the section of the document. *Fleisher* at col. 1, lines 41-54. When a user pulls up the document, the sections will be presented to give the reader of synopsis of the material contained in the document. *Fleisher* at col. 1, lines 41-54.

More specifically in Fleisher, the document is ***divided into noun phrases***. The noun phrases are given a weight that is based on the number of times that the noun phrase appears in the document and the typical usage of the noun in the English language. *Fleisher* at col. 3, lines 31-52. ***After the noun phrases of the document have been identified and ranked, the document is divided into sections*** (e.g. chapters, paragraphs or sentences). *Fleisher* at col. 3, lines 52-60. Each section is then analyzed to provide a section noun phrase list which corresponds to the section. *Fleisher* at col. 3, lines 61-65. A ***score*** is given to the section ***based on the noun phrases***. Fleisher teaches that "[o]ne method of determining the "score" for a section is to simply add the weights associated with each of the noun phrases identified for the

section which are also found in the document noun phrase list 26." *Fleisher* at col. 4, lines 9-14. From the rankings, the Extractor then determines which paragraphs of the original input document will appear in the output text. *Fleisher* at col. 4, lines 16-18. ***Fleisher uses the noun phrase to rank the sections to determine which section to output*** because Fleisher is concerned with providing an automatic means by which to process available documents to provide a reader a synopsis of the material contained in the document.

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Brin identifies Anchor Text as text of links in a page. For the search engine, Brin associates the text of the link with the page that the link is on and the page that the link points to. Through the double association, searches can be ran for non-text items that are not identified by a web crawler and the accuracy of the search is increased. Here, Brin is teaching calculating a citation importance for a page through a PageRank and using anchor text to improve the accuracy of a search. For example, a user may input a very general search such as "Bill Clinton." The search engine will produce search results that include pages which have a high PageRank (e.g. have been cited to by other documents).

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Independent claim 17 includes the following combination of features that is not taught or suggested by the cited reference:

> determining fields of the document, wherein each field includes a contextual section of the document;
>
> determining a field-specific term frequency for each of the determined fields in the document for each query term;

> ***weighting each field-specific term frequency according to a field weight designated for the field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type;***
>
> computing a field-weighted document weight for each query term based on the field-weighted term frequency for each query term; and
>
> computing the field-weighted score as a function of the field-weighted document weight of all query terms.

As an example of the above combination of features, field weights may be associated with a document ***based on a query type***. Therefore, for example, if a search does an author query, the author field may carry a higher weight for the document and a body field may have a lower weight. Contrariwise, if a search does a text query on the same document, the author field may carry a lower weight for the document and the body field may have a higher weight.

The above combination of features is not taught or suggested by the cited references. Applicants can find no teaching or suggestion in either of the references of "weighting each field-specific term frequency according to a field weight designated for the field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type." Accordingly, applicants assert that claim 17 is allowable.

Independent claim 26 includes the following combination of features that is not taught or suggested by the cited reference:

> determining fields of the document, wherein each field includes a contextual section of the document;
>
> determining a field-specific term frequency for each of the determined fields in the document for each query term;
>
> ***weighting each field-specific term frequency according to a field weight designated for the field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type;***

computing a field-weighted document weight for each query term based on the field-weighted term frequency for each query term; and

computing the field-weighted score as a function of the field-weighted document weight of all query terms.

As an example of the above combination of features, field weights may be associated with a document ***based on a query type***. Therefore, for example, if a search does an author query, the author field may carry a higher weight for the document and a body field may have a lower weight. Contrariwise, if a search does a text query on the same document, the author field may carry a lower weight for the document and the body field may have a higher weight.

The above combination of features is not taught or suggested by the cited references. Applicants can find no teaching or suggestion in either of the references of "weighting each field-specific term frequency according to a field weight designated for the field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type." Accordingly applicants assert that claim 26 is allowable over the references.

Independent claim 35 includes the following combination of features that is not taught or suggested by the cited reference:

a field-weighted term frequency calculator that determines a field-specific term frequency for each field in the document for each query term, wherein each field includes a contextual section of the document, wherein each field-specific term frequency is weighted according to a field weight identified for the corresponding field to compute a field-weighted term frequency for each query term, wherein the field weight is different for the fields, wherein the field weight indicates the relevance of the field in the document based on the query type;

a field-weighted document weight calculator that computes a field-weighted document weight for each query term based on the field-specific term frequency for each query term; and

a document score calculator that computes the field-weighted score as a function of the field-weighted document weight of all query terms.

As an example of the above combination of features, field weights may be associated with a document ***based on a query type***. Therefore, for example, if a search does an author query, the author field may carry a higher weight for the document and a body field may have a

lower weight. Contrariwise, if a search does a text query on the same document, the author field may carry a lower weight for the document and the body field may have a higher weight.

The above combination of features is not taught or suggested by the cited references. Applicants can find no teaching or suggestion in either of the references of "weighting each field-specific term frequency according to a field weight designated for the field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type." Accordingly applicants assert that claim 35 is allowable over the references.

Independent claim 38 includes the following combination of features that is not taught or suggested by the cited reference:

> determining fields of the document, wherein each field includes a contextual section of the document;
>
> ***computing a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type;***
>
> computing a field-weighted document weight for each query term based on the field-weighted term frequency for each field in the document; and
>
> computing the field-weight score as a function of the field-weighted document weights of the query terms.

As an example of the above combination of features, field weights may be associated with a document ***based on a query type***. Therefore, for example, if a search does an author query, the author field may carry a higher weight for the document and a body field may have a lower weight. Contrariwise, if a search does a text query on the same document, the author field may carry a lower weight for the document and the body field may have a higher weight.

The above combination of features is not taught or suggested by the cited references. Applicants can find no teaching or suggestion in either of the references of "computing a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type." Accordingly applicants assert that claim 38 is allowable over the references.

Independent claim 44 includes the following combination of features that is not taught or suggested by the cited reference:

> determining fields of the document, wherein each field includes a contextual section of the document;
>
> ***computing a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type;***
>
> computing a field-weighted document weight for each query term based on the field-weighted term frequency for each field in the document; and
>
> computing the field-weight score as a function of the field-weighted document weights of the query terms.

As an example of the above combination of features, field weights may be associated with a document ***based on a query type***. Therefore, for example, if a search does an author query, the author field may carry a higher weight for the document and a body field may have a lower weight. Contrariwise, if a search does a text query on the same document, the author field may carry a lower weight for the document and the body field may have a higher weight.

The above combination of features is not taught or suggested by the cited references. Applicants can find no teaching or suggestion in either of the references of "computing a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type." Accordingly applicants assert that claim 44 is allowable over the references.

Independent claim 50 includes the following combination of features that is not taught or suggested by the cited reference:

> ***a field-weighted term frequency calculator that computes a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type;***

a field-weighted document weight calculator that computes a field-weighted document weight for each query term based on the field-weighted term frequency for each field in the document; and

a search engine that computes the field-weighted score as a function of the field-weighted document weights of the query terms.

As an example of the above combination of features, field weights may be associated with a document ***based on a query type***. Therefore, for example, if a search does an author query, the author field may carry a higher weight for the document and a body field may have a lower weight. Contrariwise, if a search does a text query on the same document, the author field may carry a lower weight for the document and the body field may have a higher weight.

The above combination of features is not taught or suggested by the cited references. Applicants can find no teaching or suggestion in either of the references of "a field-weighted term frequency calculator that computes a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type." Accordingly applicants assert that claim 50 is allowable over the references.

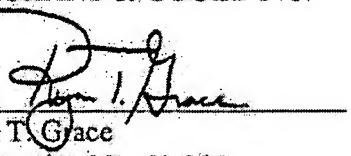
With regard to the dependent claims, they include features not taught or suggested by the cited references. Moreover, they ultimately depend from the independent claims above. As such, they should be found allowable for at least the same reasons stated above.

III. Request for Reconsideration

In view of the foregoing amendments and remarks, all pending claims are believed to be allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicants at the telephone number provided below.

Respectfully submitted,

MERCHANT & GOULD P.C.



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